



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of:

Yongwei CAO *et al.*

Appln. No.: 09/404,520

Filed: September 23, 1999

For: Emericella Nidulans Genome Sequence on Computer Readable Medium and Uses
Thereof

Confirmation No.: 8452

Art Unit: 1637

Examiner: T.E. Strzelecka

Atty. Docket: 16517.081

APPELLANT'S REPLY BRIEF

Mail Stop Appeal Brief – Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This is a reply to the Examiner's Answer mailed November 19, 2004
("Examiner's Answer").

1. Withdrawn Rejections

Appellant acknowledges that the rejections under 35 U.S.C. § 101 and 112, first paragraph have been withdrawn.

2. Arguments to Rejection Under 35 U.S.C. § 103(a)

The Examiner's Answer clarifies the current rejection under 35 U.S.C. § 103(a). In particular, the Examiner argues that "claims 58-72 are obvious under 35 U.S.C. § 103(a) over Rodriguez-Tome *et al.*, taking into account the fact that the sole difference between Rodriguez-Tome *et al.* and Appellant's claims are nucleic acid sequence data for sequences with SEQ ID NO: 16207-27905, which are considered as non-functional

descriptive material.”¹ Examiner’s Answer at pages 5-6. Appellant respectfully disagrees.

As previously argued, to establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination must be found in the prior art, and not be based on Applicant’s disclosure. *See* M.P.E.P. §§2143.01 and 2143.03.

In a proper obviousness determination, the changes from the prior art must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the claimed invention. *See In re Chu*, 36 U.S.P.Q.2d 1089, 1094 (Fed. Cir. 1995). This includes what could be characterized as simple changes. *See, e.g., In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down.).

All claim limitations must be considered when determining patentability. *See, In re Gulack*, 703 F.2d 1381, 1385, 217 U.S.P.Q. 401 (Fed. Cir. 1983). “Differences between an invention and the prior art cited against it cannot be ignored merely because those differences reside in the content of the printed matter.” *Id.* at 1385. The Federal Circuit has held that “printed matter cases have no factual relevance where the invention as defined by the claims requires that the information be processed not by the mind but

¹ Apparently the Examiner analogizes non-functional descriptive material to printed matter through the citation of case law directed in part to printed matter. *See, e.g., In re Gulack*, 703 F.2d 1381, 217 U.S.P.Q. 401 (Fed. Cir. 1983).

by a machine, the computer.” *In re Lowry*, 32 F.3d 1579, 1583, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (internal quotes omitted).

Only when the prior art teaches or suggests the claimed invention does the burden fall on the applicant to rebut that *prima facie* case. *See In re Dillon*, 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990) (in banc), *cert. denied*, 500 U.S. 904 (1991). The Patent Office has not established the absence of a novel, nonobvious functional relationship between the sequences and the computer readable medium. *See, e.g., In re Lowry*, 32 F.2d 1579, 1584, 32 U.S.P.Q.2d (Fed. Cir. 1994) (the burden of establishing the absence of a novel, nonobvious functional relationship rests with the PTO). Rather, the Examiner quotes several lengthy sections of the MPEP and merely concludes that “[s]equences stored on a computer readable medium are [] considered as non-functional descriptive material.” Examiner’s Answer at page 4. The Office argues that “there is no evidence that nucleic acid sequence data claimed by Appellant, which constitute the sole difference from the prior art, introduce a new and unobvious functional relationship between the data and the process which uses them and the computer system which performs the process.” *Id.* at page 7.

Contrary to the Office’s position, the sequences stored on a computer readable medium, when read in light of the claims as a whole, exhibit the requisite functional relationship. The appealed claims are directed to methods of identifying, detecting or ranking a nucleotide sequence comprising, *inter alia*, comparing a target sequence to a sequence stored in computer readable medium having recorded thereon at least 100 nucleotide sequences including sequences selected from the group consisting of SEQ ID NO: 16207 through SEQ ID NO: 27905 and complements thereof. The sequences stored on computer readable medium are utilized in the act of comparing and thus greatly facilitate the identification, detection or ranking of nucleotide sequences within the

sequences stored on computer readable medium. As such, they cannot be ignored as non-functional, descriptive material in the obviousness determination.

The Examiner argues that the “nucleic acid sequence data, which comprise sequences with SEQ ID NO: 16207-27905 are classified as non-functional descriptive material, and as such, do not represent an unobvious contribution over the prior art reference of Rodriguez-Tome *et al.*” Examiner’s Answer at page 9. The Examiner relies on several sections of the MPEP to argue that the sequences stored on a computer readable medium are considered non-functional descriptive material. The Examiner however provides no factual support for such a proposition.

The claimed methods comprising, *inter alia*, comparing target sequences to a sequence stored on a computer readable medium relies on a computer readable medium having recorded on it at least 100 nucleotide sequences including sequences selected from the group consisting of SEQ ID NO: 16207 through SEQ ID NO: 27905 and complements thereof. The claimed methods would not achieve their purposes (identification, detection or ranking) without the sequences recorded on a computer readable medium. As previously argued, the claimed methods allow for the easy identification of nucleotide sequences selected from the group consisting of SEQ ID NO: 16207 through SEQ ID NO: 27905 and complements thereof.

As such, the sequences are functionally related to the computer readable medium and therefore must be considered for the obviousness determination.

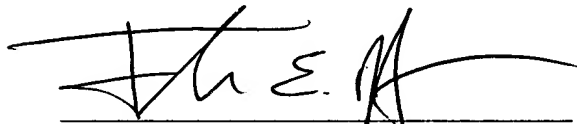
In sum, the Examiner’s conclusion of obviousness is based on improper determination that the sequences stored on computer readable medium are non-function descriptive material. As shown above, this is not correct. The cited reference does not teach or suggest the claimed methods. No suggestion to modify the cited reference has been found in the cited reference or pointed out to Appellant from the general knowledge of one of ordinary skill in the art. For at least these reasons, the Appellant respectfully

submits that the Examiner has failed to establish a *prima facie* case of obviousness, as required by 35 U.S.C. § 103. As such, the rejection of claims 58-72 is improper and should be reversed.

CONCLUSION

In view of the foregoing, it is respectfully requested that the Board of Patent Appeals and Interferences reverse the Rejections and that the subject application be allowed forthwith.

Respectfully submitted,



Thomas E. Holsten (Reg. No. 46,098)
David R. Marsh (Reg. No. 41,408)

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Of counsel:
Lawrence M. Lavin, Jr. (Reg. No. 30,768)
Thomas E. Kelley (Reg. No. 29,938)
Monsanto Company

ARNOLD & PORTER LLP
Tel.: 202.942.5000
Fax: 202.942.5999

Correspondence Address:
Gail Wuellner
Monsanto Company
800 N. Lindbergh Blvd.
Mail Zone E2NA
St. Louis, MO 63167
Tel: 314-694-1000
Fax: 314-694-9009